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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/487,401	01/19/2000	John R. Shedden	ST9-99-033	3119
;	7590 06/19/2003			
David N Koffsky Esq			EXAMINER	
One Landmark	ey Ruggiero & Perle c Square Suite 903		FLEURANTIN, JEAN B	
Stamford, CT 06901			ART UNIT	PAPER NUMBER
			2172	
			DATE MAILED: 06/19/2003	

Please find below and/or attached an Office communication concerning this application or proceeding.

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		Application No.	Applicant(s)		
•		09/487,401	SHEDDEN,	•	
Office Action Summary		Examiner	Art Unit		
	·	Jean B Fleurantin	2172		
_ .	The MAILING DATE of this communication app			ce address	
Period fo					
THE - Exte after - If the - If NC - Failu - Any	ORTENED STATUTORY PERIOD FOR REPLY MAILING DATE OF THIS COMMUNICATION. nsions of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. It is period for reply specified above is less than thirty (30) days, a reply of period for reply is specified above, the maximum statutory period were to reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing end patent term adjustment. See 37 CFR 1.704(b).	86(a). In no event, however within the statutory mining will apply and will expire S cause the application to	er, may a reply be timely filed num of thirty (30) days will be considere IX (6) MONTHS from the mailing date of become ABANDONED (35 U.S.C. § 13	f this communication.	
1) <u> </u>	Responsive to communication(s) filed on RCE	5 27 May 2003			
2a)□		is action is non-fin	al	- .	
3)□	Since this application is in condition for allowa			to the morite is	
,—	closed in accordance with the practice under				
•	ion of Claims				
•	Claim(s) <u>1-18</u> is/are pending in the application		1 !		
	4a) Of the above claim(s) is/are withdray	vn from considera	tion.	7	
	Claim(s) is/are allowed.				
	Claim(s) <u>1-18</u> is/are rejected.			·	
•	Claim(s) is/are objected to.	14:			
	Claim(s) are subject to restriction and/or ion Papers	r election requiren	ient.		
·· _	The specification is objected to by the Examine	r.			
· · ·	The drawing(s) filed on is/are: a)☐ accept	·	d to by the Examiner.		
,	Applicant may not request that any objection to the		·	5(a).	
11)	The proposed drawing correction filed on	is: a) approve	d b) disapproved by the Ex	aminer.	
	If approved, corrected drawings are required in rep	oly to this Office acti	on.		
12)	The oath or declaration is objected to by the Ex	aminer.			
Priority (under 35 U.S.C. §§ 119 and 120				
13)	Acknowledgment is made of a claim for foreign	priority under 35	U.S.C. § 119(a)-(d) or (f).		
a)	☐ All b)☐ Some * c)☐ None of:				
	1. Certified copies of the priority documents	s have been recei	ved.		
	2. Certified copies of the priority documents	s have been recei	ved in Application No	_ •	
* (3. Copies of the certified copies of the prior application from the International Bursee the attached detailed Office action for a list	reau (PCT Rule 1	7.2(a)).	onal Stage	
	Acknowledgment is made of a claim for domestic			sional application).	
	a) The translation of the foreign language pro Acknowledgment is made of a claim for domesti	• •		.,	
Attachmen	at(s)				
2) Notice	ce of References Cited (PTO-892) ce of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449) Paper No(s)	5) 🔲	Interview Summary (PTO-413) Pap Notice of Informal Patent Application Other:		
S. Patent and T	rademark Office	tion Summary	Part of Paner	No. 14	

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DETAILED ACTION

1. Claims 1-18 are remain pending for examination.

Continued Examination Under 37 CFR 1.114

2. The Request for Continued Examination has been fully considered and entered, claims 1-18 are discussed in the following rejection.

Claim Rejections - 35 USC § 112

3. Claims 1, 7 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, in limitations: (a) and (b), such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: a primary log, and a secondary log.

Claim Rejections - 35 U.S.C. § 103

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ledain et al. (US Patent No. 5,832,515) ("Ledain").

As per claims 1, 7 and 13, Ledain teaches a method for enabling improved access to data stored in a log of a computer memory system, said computer memory system having multiple copies of said log comprising a primary log and a secondary log, each log storing data transactions with a database system stored on said computer memory

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system (see col. 22, lines 41-51) as claimed, the method comprises the steps of responding to a process request to read a log, by determining a parameter indicative of demand for access to read one of said copies of said log (thus, when a request is received to read a data block from a main filesystem whose entry points have been stolen, the log device pseudo device driver 61 is required to determine whether the requested data block id currently stored on the log device disks 52; which is readable as responding to a process request to read a log, by determining a parameter indicative of demand for access to read one of said copies of said log)(see col. 21, lines 35-39). Further, in column 30, lines 63-67, Ledain teaches a substantial majority of read data requests actually satisfied from the log device through the read log stream routines 130 will occur on log disks 124, 126 separate from the log disk 122 that maintains the then current first free data segment of the log. But, Ledan does not explicitly indicate assigning the process to another of said copies of the log if said parameter has reached a threshold value. However, Ledain explicitly indicates the relocations information within the user data segment trailer is examined to determine whether any particular log block has been relocated through cleaning in excess of a threshold number of relocations, the threshold number may be set to an adaptive control defined value; which is readable as process to another of said copies of the log if said parameter has reached a threshold value, (see col. 30, lines 19-20). Further, in column 29, lines 57-59, Ledain teaches once a log disk has reached the filled segment threshold, the head of the logical log wraps to the next log disk in sequence. Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the teachings of Ledain with assigning the process to another of said copies of the log if said parameter has reached a threshold

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value. This modification would allow the teachings of Ledain to improve the accuracy and the reliability of the active log read I/O balancing for log duplexing, and provide efficient storage and retrieval of data with respect to an operating system executing on a computer system to the data storage system, (see col. 5, lines 38-40).

As per claims 2, 8 and 14, Ledain teaches a method as claimed, wherein said one of said copies of the log is the primary log (thus, the log device superblock manager 70 is responsible for aternate copies of the superblock to be written to the log header block, to provide each superblock copy with a sequential or versioned serial number when a complete instance of the superblock is written out to the log header and to mark each superblock copy as being valid and complete as written to the log header at the conclusion of the written of each superblock copy; which is as said copies of the log is the primary log)(see col. 22, lines 41-51).

As per claims 3, 9 and 15, Ledain teaches a method as claimed, wherein said parameter is a count of the processes assigned to the primary log (thus, once a log disk has reached the filled segment threshold, the head of the logical log wraps to the next log disk in sequence, which is readable as wherein said parameter is a count of the processes assigned to the primary log)(see col. 29, lines 57-59).

As per claims 4, 10 and 16, in addition to the discussion in claim 1, Ledain teaches the step of b) distributes new process assignments to both the primary log and secondary log in an attempt to balance work of the respective logs (thus, file data reads must continually evaluate the log itself to determine whether more current data resides in the log or the main portion of the filesystem; which is readable as distributes new process assignments to both the primary log and secondary log in an attempt to balance work of

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the respective logs)(see col. 4, lines 12-15). Further, in columns 17-18, lines 65-6, Ledain teaches the balance of the current data segment may be filled with new data blocks written through the data interface 66 or as a result of cleaning the new log tail data segment, where data blocks are actively being directed through the data interface 66 for storage on the log device, the compacted data blocks obtained from the prior log tail data segment may be mixed in order of receipt by the segment I/O routine 78 into the current segment buffer maintained by the segment I/O routines 78.

As per claims 5, 11 and 17, in addition to the discussion in claim 1, Ledain further teaches b) alternates new process assignments to the primary log and the secondary log in an attempt to balance work of the respective logs (thus, the balance of the current data segment may be filled with new data blocks written through the data interface 66 or as a result of cleaning the new log tail data segment, where data blocks are actively being directed through the data interface 66 for storage on the log device, the compacted data blocks obtained from the prior log tail data segment may be mixed in order of receipt by the segment I/O routine 78 into the current segment buffer maintained by the segment I/O routines 78; which is readable as alternates new process assignments to the primary log and the secondary log in an attempt to balance work of the respective logs)(see cols. 17-18, lines 65-6).

As per claims 6, 12 and 18, Ledain teaches a method as claimed, wherein said parameter is a count of requests that have been queued to the primary log (thus, once a log disk has reached the filled segment threshold, the head of the logical log wraps to the next log disk in sequence; said parameter is a count of requests that have been queued to the primary log)(see col. 29, lines 57-59).

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5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ledain et al. US Pat. No. 6,021,408, relates to operation of the log device to dynamically balance filesystem I/O transactions. Ofek et al. US Pat. No. 6,052,797, relates to maintaining a copy or mirror of data stored at a location remote from the main or primary data storage device.

Conclusion

6. Any inquiry concerning this communication from examiner should be directed to Jean Bolte Fleurantin at (703) 308-6718. The examiner can normally be reached on Monday through Friday from 7:30 A.M. to 6:00 P.M.

If any attempt to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Mrs. KIM VU can be reached at (703) 305-8449. The FAX phone numbers for the Group 2100 Customer Service Center are: *After Final* (703) 746-7238, *Official* (703) 746-7239, and *Non-Official* (703) 746-7240. NOTE: Documents transmitted by facsimile will be entered as official documents on the file wrapper unless clearly marked "*DRAFT*".

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2100 Customer Service Center receptionist whose telephone numbers are (703) 306-5631, (703) 306-5632, (703) 306-5633.

Jean Bolte Fleurantin

June 11, 2003

JBF/

